

REMARKS

Review and reconsideration on the merits are requested.

Status of Claims

- 1-5. (Cancelled).
- 6. (Currently Amended) (depend 75).
- 7-10. (Cancelled).
- 11-35. (Withdrawn).
- 36-37. (Cancelled).
- 38-62. (Withdrawn).
- 63. (Previously Presented).
- 64-65. (Withdrawn).
- 66-74. (Cancelled).
- 75-76. (New).

Claim Rejections - 35 U.S.C. §112

The language objected to by the Examiner is no longer used in the claims.

Withdrawal is requested.

The Prior Art

U.S. 4,543,279 Kai (Kai); U.S. 5,512,337 Littmann et al (Littman).

The Rejection

Claims 73-74, 6 and 67-68 were rejected under 35 U.S.C. §102(b) as anticipated by Kai.

Claims 73 and 74 are substantially rewritten as claims 75 and 76.

Claim 6 is made to depend from claim 75.

Claims 67-68 are cancelled.

The Examiner is requested to note that claim 63 is still active as (Previously Presented).

The rejection of the active claims which are not withdrawn nor cancelled is respectfully traversed.

The Examiner's position is set forth in the Action and will not be repeated here except as necessary to an understanding of Applicants' traversal which is now presented.

Traversal

The Examiner will see that Fig. A to Fig. F are attached hereto. Whenever one of these Figures is mentioned herein, Applicants refer to those figures. When reference is to Fig. 2 or to Fig. 3, these refer to Figures in the present application as filed.

Claim 75, an independent claim, defines that the major features of the present invention as follows:

First feature: the tearable thermoplastic resin film has uniform, parallel linear scratches on its entire surface in such arrangement obtained by sliding contact with a rotating roll having fine, hard particles with sharp edges over its entire surface.

As shown in Fig. A (which corresponds to Fig. 2 of the present specification) and Fig. B (which corresponds to Fig. 3 of the present specification), uniform, parallel linear scratches extend longitudinally and cover the entire surface of the film.

Because the linear scratches are formed by fine hard particles with sharp edges, their Lengths are substantially equal. As shown in Fig. D, the fine hard particles are randomly distributed on a roll surface and their longitudinal distances (gaps) D and transverse distances (intervals) W are the same on average. As a consequence, the distribution of linear scratches

on the film is as shown in Figs. C and E. While the distribution of linear scratches shown in Fig. C is not explicitly described in those words in the specification or the attached drawings, it is clearly the case from the method of forming the linear scratches by sliding contact with a rotating roll having fine hard particles with sharp edges over its entire surface. Accordingly, in Applicants' view, the above first feature is clearly supported by the specification and/or the attached drawings. Applicants consider that the words "such arrangement obtained by sliding contact with a rotating roll having fine hard particles with sharp edges over its entire surface" substantially define the distribution of linear scratches shown in Fig. C.

If the Examiner believes that there is some error in the Applicants' reasoning on this point, the Examiner is requested to contact the undersigned so that a telephone interview may be arranged.

Second feature: the major second feature of the present invention is that the linear scratches have width of 0.1 to 10 μm and depth of 1 to 40% of the film thickness, with intervals of 10 to 200 μm . The depth of the linear scratches should be 1 to 40% of the film thickness to meet both requirements of high strength and good easy-to-straight-tear characteristics (pages 29-30 of the specification).

Third feature: with such narrow, densely distributed linear scratches, the film can be easily torn straight in one direction from any point along the linear scratches over its longitudinal length. This straight tearing is depicted in Fig. C. Because longitudinally adjacent linear scratches have a gap D, which is essentially the same as the interval W of 10 to 200 μm , a tearing line propagates from one linear scratch to a longitudinally adjacent linear scratch successively. This tearing manner is described at page 32 of the specification.

Kai

As shown in Fig. F attached hereto, the film of Kai has scratches only in the longitudinal edge portions thereof. The scratches 3 are formed by a rotary shaft 12 with abrasive 14, but they are formed only in the longitudinal edge portions. Accordingly, although the film of Kai can be torn from any point, a tearing line often does not propagate straight as shown in Fig. F, because there are no linear scratches in the center area of the film.

Because the tearable thermoplastic resin film of the present invention has linear scratches on its entire surface, the film must meet both requirements of high strength and good easy-to-tear straight characteristics. Accordingly, the linear scratches should have a width of 0.1 to 10 μm and depth of 1 to 40% of the film thickness, with intervals of 10 to 200 μm .

Kai discloses that at least five scratches or cuts are formed, preferably more than 20 scratches or cuts and more preferably more than 100 scratches or cuts, per centimeter of the length of the edge line (column 3, lines 55-58). This means that the intervals of the scratches are 2 mm or less, preferably less than 500 μm , more preferably less than 100 μm . However, Kai is silent about the limit of the claims herein that the linear scratches have a width of 0.1 to 10 μm and a depth of 1 to 40% of the film thickness.

The presence of the linear scratches in accordance with the present invention is extremely important. Specifically, the uniform, parallel, linear scratches present on the entire surface of the film ensures straight tearing in one direction along the linear scratches over its longitudinal length, thereby avoiding curved tearing, which often occurs in plastic films. Further, with uniform, parallel, linear scratches present on the entire surface, the tearable thermoplastic resin film of the present invention can be used for wrappings of any size, while the film of Kai with intermittent scratches can only be used for particular wrappings of such

size. In other words, films with intermittent scratches of various intervals would be produced according to the Kai technology, while one tearable film having linear scratches on its entire surface need only be produced to form wrappings of various sizes in the present invention.

With respect to "particular wrappings of such size", the film of Kai has intermittent scratches whose intervals are suitable only for wrappings having sizes corresponding to such intervals. For instance, a film having intermittent scratches at intervals of 10 cm can be used only for wrappings as long as about 10 cm. If wrappings of 20 cm are to be formed, another film having intermittent scratches at intervals of 20 cm should be produced. Therefore, the film of Kai can be used only for wrappings of such size. On the other hand, the film of the present invention having linear scratches on its entire surface can be used for wrappings of any size.

The arrangement recited in claim 75 is depicted in Fig. C attached. This arrangement of linear scratches is completely different from that of Kai. Note that the arrangement of linear scratches depicted in Fig. C is invariably obtained by sliding contact with a rotating roll having fine hard particles with sharp edges over its entire surface as shown in Fig. 2 of the present application. Accordingly, although of "in such arrangement obtained by sliding contact with a rotating roll having fine hard particles with sharp edges over its entire surface" looks a process limitation, what is defined is the arrangement of linear scratches depicted in Fig. C.

Basis for Claims

"Uniform" finds support at page 4, lines 15-18, page 15, lines 23-27 and page 18, lines 21-23.

With respect to the term "uniform", note the sentence "To form uniform linear scratches, the fine particles are preferably attached to 50% or more of the roll surface" on page 16 of the specification. Because fine particles are randomly distributed on the roll surface, the linear scratches are formed randomly on the film. However, because the linear scratches are very small, it appears as if the linear scratches exist uniformly on the film surface as shown in Fig. C. In other words, there is no unevenness in the distribution of linear scratches on the film surface.

"Parallel linear scratches" finds support in Fig. 2 and at page 3, lines 16-19.

"On its entire surface" finds support at page 3, line 11 and page 5, lines 26-28.

Also with respect to the term "on its entire surface", see Fig. C, in which linear scratches exist on the entire surface. The linear scratches are obtained by sliding contact with a rotating roll having fine hard particles with sharp edges over its entire surface. It is thus impossible that the linear scratches will exist only in the width or longitudinal direction. The entire surface of the film is covered with uniformly distributed linear scratches as shown in Fig. C.

"Film is easily torn straight in one direction" finds support at page 1, lines 6-8 and page 27, line 17.

"From any point along said linear scratches" finds support at page 3, lines 16-19 and page 29, lines 21 and 22.

With respect to the term "over its longitudinal length", the specification describes on page 32 that the resultant easy-to-straight-tear polyester film was torn straight at least in a longitudinal length of an A4 size or so. This is clear from Fig. C. Because large numbers of linear scratches extend longitudinally with small longitudinal gaps, tearing propagates from one

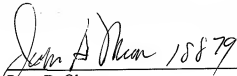
linear scratch to another longitudinally adjacent linear scratch. As a result, the film is torn straight. This requirement clarifies one advantage of the present invention over Kai.

Applicants rely on the above remarks for patentability and the basis of claims 76.

Withdrawal of all rejections is requested.

The USPTO is directed and authorized to charge required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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